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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/786,157

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Shigeaki Tamura

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09/08/2004

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EXAMINER

AU, SCOTT D

ART UNIT

PAPER NUMBER

2635

DATE MAILED: 09/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/786,157

Applicant(s)

TAMURA, SHIGEAKI

Examiner

Scott Au

Art Unit

2635

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 6/17/04.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

This communication is in response to applicant's response to an Amendment B, which is filed June 17, 2004.

An amendment B to the claims 1-5 have been entered and made of record in the Application of Tamura for a "Keyless entry system" filed March 1, 2001.

Claims 1-5 are pending.

The new claims 6-11 are introduced.

Response to Arguments

Applicant amended and arguments to the with respect to claims 1-5 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2,5,7-8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto (US# 6,078,293) in view of Utsunomiya et al. (US# 6,426,468).

Referring to claims 1,7-8 and 10, Yamamoto disclose a keyless entry system comprising:

a transmitter (4) (i.e. transmitter) for transmitting a radio wave signal by operation of a user (col. 3 lines 19-22);

a receiver (1) (i.e. column switch) for receiving the signal from the transmitter (4) via an antenna (1A) (i.e. receiver's antenna) (col. 3 lines 30-43);

a controller (6) (i.e. control unit) for controlling action as indicated by the signal, wherein the layer substrates are electrically connected to a common ground (col. 3 lines 45-58; see Figures 1-2).

However, Yamamoto did not explicitly disclose the receiver and the controller formed on multilayer substrates.

In the same field of endeavor of multilayer circuit, Utsunomiya et al. disclose control circuit formed on multilayer substrate (col. 4 lines 44-67 and col. 5 lines 13-16) and shared a common ground with other conductor patterns.

One ordinary skill in the art understands that multilayer substrate circuit of Utsunomiya et al. is desirable in the receiver and controller circuit of Yamamoto because Yamamoto suggests a receiver (1) is connected to the controller (6) and both share the same common ground (1B) (col.3 lines 9-15; see Figure 2) and Utsunomiya et al. suggest that a circuit board is built from a multilayer substrates and copper layer is used as a common ground plane to which the semiconductor chip and conductor patterns are connected (col. 4 lines 44-67 and col. 5 lines 14-16). Therefore, it would have been obvious to a person of ordinary skill in the art the time of the invention was

made to use multilayer substrate circuit of Utsunomiya et al. in the receiver and controller circuit of Yamamoto with the motivation for doing so would increase higher performance.

Referring to claim 2, Yamamoto in view of Utsunomiya et al. disclose the keyless entry system of claim 1, Yamamoto discloses wherein the receiver (1) is attachably connectable to the controller (6) at the connection interface (i.e. the connection interface at power supply 8) for the receiver and the controller for electrically connecting a ground terminal of the receiver and a ground of the controller to the common ground (1B) (i.e. common ground) (col. 3 lines 10-15 and 45-59).

Referring to claim 5, Yamamoto in view of Utsunomiya et al. disclose the keyless entry system of claim 2, Yamamoto discloses wherein the connection interface comprises a connector (i.e. battery 8 serves a connector between the receiver and controller with two terminals connecting to the voltage regulators 1L and 6P, see Figure 2) having at least two conductive terminals, and at least one of the two conductive terminals is for connecting the at least one layer of the first multilayer substrate and at least one layer of the second multilayer substrate to the common ground (col. 3 lines 10-15 and 45-59).

Claims 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto (US# 6,078,293) in view of Utsunomiya et al. (US# 6,426,468) as applied to claim 1 above, and further in view of (Japanese Patent Laid-Open # 8-216735).

Referring to claim 3, Yamamoto in view of Utsunomiya et al. disclose the keyless system of claim 1. However, Yamamoto in view of Utsunomiya et al. did not explicitly disclose the receiver and the controller are mounted corresponding to a combination meter, which is mounted relative to a front of a driver's seat in a vehicle.

In the same field of endeavor of receiver integrated within the combination meter, Japanese Patent Laid-Open (No. 8-216735) disclosed by the Applicant's prior art mentioned on page 2, first paragraph, "a structure having a receiver integrated within the combination meter mounted in front of the driver's seat, and an antenna is mounted on the meter board or in the meter housing is disclosed in Japanese Patent Laid-Open No 8-216735".

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention was made to include a structure having a receiver integrated within the combination meter mounted in front of the driver's seat, and an antenna is mounted on the meter board or in the meter housing is disclosed in Japanese Patent Laid-Open No. 8-216735 into vehicle operation system of Yamamoto in view of Utsunomiya et al. with the motivation for doing so would allow a reduction in space, number of component and cost.

Referring to claim 4, Yamamoto in view of Utsunomiya et al. and Japanese Patent Laid-Open No. 8-216735 disclose the keyless system of claim 3, Japanese Patent Laid-Open No. 8-216735 discloses wherein the receiver is integrally or externally mounted to the combination of meter (i.e. see Applicant's prior art mentioned on page 2, first paragraph).

Claims 6, 9, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto (US# 6,078,293) in view of Utsunomiya et al. (US# 6,426,468) as applied to claim 1 above, and further in view of Falbel (US# 3,751,664).

Referring to claims 6, 9 and 11, Yamamoto in view of Utsunomiya et al. disclose the keyless system of claims 1, 7 and 10. However, Yamamoto in view of Utsunomiya et al. did not explicitly disclose layers connected so as to exhibit effect for enhancing receiving sensitivity of an antenna connected to the receiver.

In the same field of endeavor of image reflecting method, Falbel discloses the use of image reflecting of a mirror to improve the sensitivity of the detector (col. 3 lines 29-41).

At the time the invention, it would have been obvious to a person of ordinary skill in the art to recognize the need for a method of using the image reflecting of a mirror to improve the sensitivity of the detector is desirable in the multilayer substrate of Yamamoto in view of Utsunomiya et al. with the motivation for doing so would allow the receiver to have greater sensitivity.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Au whose telephone number is (571) 272-3063. The examiner can normally be reached on Mon-Fri, 8:30AM – 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Horabik can be reached at (571) 272-3068. The fax phone numbers for the organization where this application or proceeding is assigned are (703)-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-305-3900.

Scott Au

MICHAEL HORABIK
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600



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